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**FIRST LIST OF THE DERMAPTERA AND ORTHOPTERA OF  
PLUMMERS ISLAND, MARYLAND, AND VICINITY.**

BY W. L. MCATEE AND A. N. CAUDELL.

In this paper are summarized the results of collecting of Dermaptera and Orthoptera by members of the Washington Biologists' Field Club and others upon Plummers Island, Maryland, and along the Potomac River from Great Falls to Little Falls. (See Pl. XIII.) Like most localities this region yields species verging on the southern border and others on the northern border of their ranges. Such cases always of interest to the student of geographical distribution, are particularly so here along the boundary between the Piedmont Plateau and the Atlantic Coastal Plain.<sup>1</sup> Species which have a more northerly or highland distribution include: *Diapheromera femorata*, *Spharagemon bolli*, *Melanoplus scudderi*, *M. atlantis*, *Conocephalus saltans*, *Atlanticus americanus*, *A. davisii*, *Ceuthophilus gracilipes*, *Nemobius maculatus*, *N. bruneri*, and *N. confusus*. Species more characteristic of the lowland and southerly regions, that occur in our area are: *Ischnoptera divisa*, *I. coultoniana*, *Neoconocephalus exiliscanorus*, *N. caudellianus*, *N. palustris*, *Orchelimum laticauda*, *Falcicula hebardi* and *Hapithus quadratus*.

The number of species included in the present list by families is: Labiidae, 1; Forficulidae, 1; Blattidae, 7; Mantidae, 1; Phasmidae, 2; Acridiidae, 36; Tettigoniidae, 33; Gryllidae, 24; a total of 105.<sup>2</sup> Of this number 73 species have been taken on Plummers Island itself.

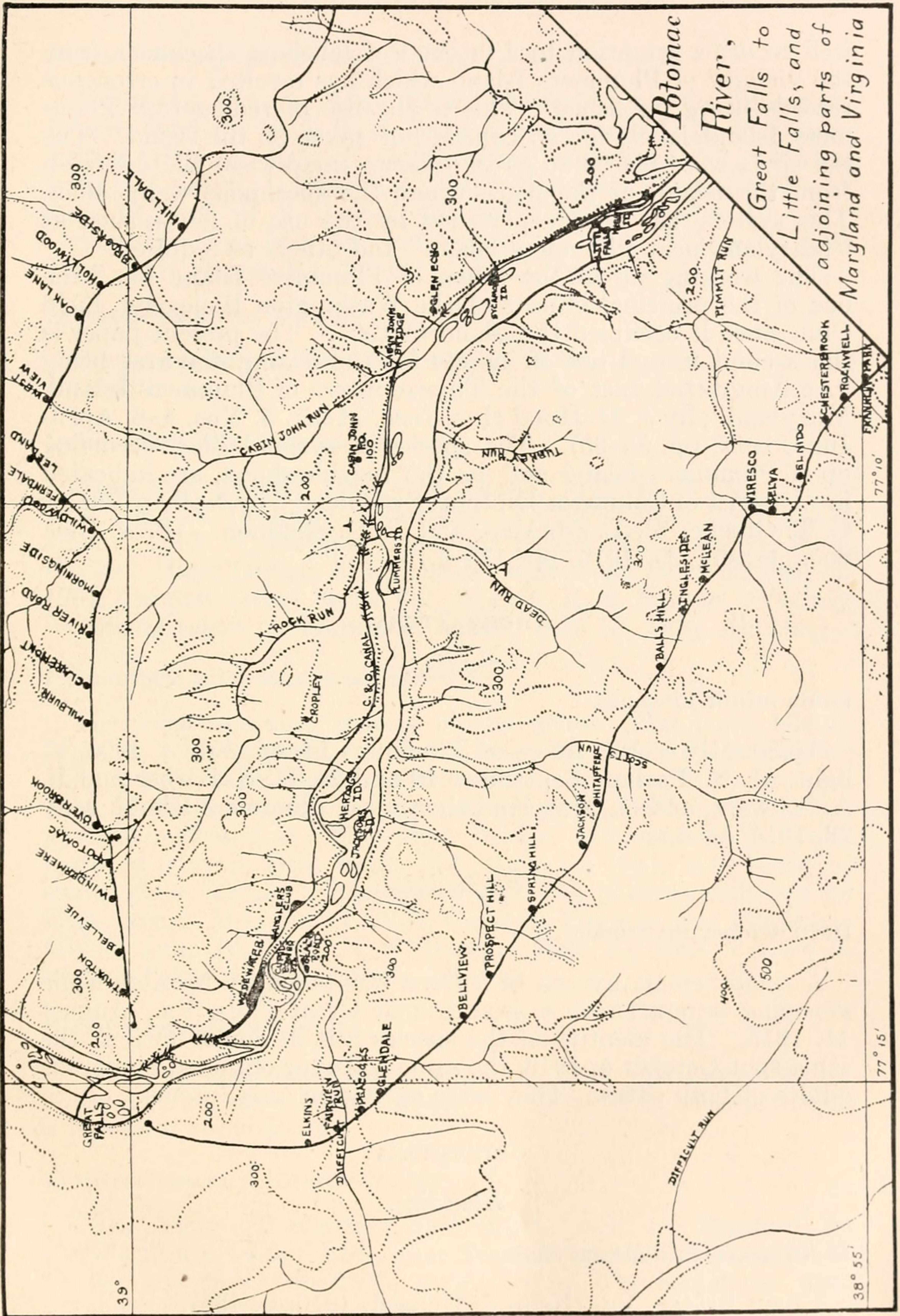
The island has an area of about 12 acres, and considering its topography the number of species of Orthoptera is high. Approximately half of the entire area is wooded lowland and it is flooded usually from 1 to 3 times annually. The higher parts of the island are rocky and the greatest elevation is 75 feet above river level. The southern exposure of the island is warm and often dry, while the northern is shaded, cooler, and usually damp. Otherwise there is little variety of ecologic conditions; there is no stream nor permanent standing water on the island, nor any open grassland.

The collectors of the material upon which this paper is based are named on subsequent pages in connection with the records of specimens taken. The points at which collecting was done may be located on the accompanying map. In this connection it is

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<sup>1</sup> See Rehn and Hebard, 1916 (2).

<sup>2</sup> The number of species of the same groups in the list for the State of New Jersey (Ann. Rep. N. J. State Museum, 1909) is 154.



**Potomac River,**  
*Great Falls to Little Falls, and adjoining parts of Maryland and Virginia*

well to draw attention to a method of labelling specimens from the vicinity of Plummers Island which has resulted in erroneous records being published. This is the use of red-spotted Plummers Island labels for specimens not taken on the island. The red spots were placed so as to indicate (map-wise) the direction from the island of the place where the specimens were taken. This system has been superseded by the use of labels such as "Maryland near Plummers Island" and others as required.

The working up of the fauna of Plummers Island has been one of the principal objects of the Washington Biologists' Field Club since it occupied the island in 1901. The present paper is the second formal list of insects for the island, the first being "An Annotated List of the Thysanoptera of Plummers Island, Maryland", by J. D. Hood (*Ins. Insc. Mens.* 5, Nos. 4-6, April-June, 1917, pp. 53-65). The species of syrphid flies, occurring upon Plummers Island and in the neighborhood, are indicated in "District of Columbia Diptera: Syrphidae," by Nathan Banks, C. T. Greene, W. L. McAtee, and R. C. Shannon. (*Proc. Biol. Soc., Wash.*, 29, 1916, pp. 175-6.)

#### DERMAPTERA.

##### *Labiidae.*

##### ***Labia minor*** Linnaeus.

Apparently scarce; taken on Plummers Island, July 4, 1900, at light, H. S. Barber; September 10 and 24, H. S. Barber and E. A. Schwarz, and on Maryland shore near Plummers Island, May 23, 1915, McAtee.

##### *Forficulidae.*

##### ***Doru aculeatum*** Scudder.

A single female nymph of a *Doru* was taken by McAtee while sweeping vegetation in a swamp near Great Falls, Va., August 11, 1915. The identity of the species was in doubt until at the same spot October 4, 1916, the same collector obtained numerous adults of both sexes. They were sitting on sedge stems.

#### ORTHOPTERA.

##### *Blattidae.*

##### ***Ischnoptera coulouiana*** Saussure.

Chain Bridge, Va. (Rehn & Hebard, 1910, p. 436).

**Ischnoptera deropeltiformis** Bruner. (= *johnsoni* Rehn.)

Numerous records, May 19 to November 3. On Plummers Island, June 15, 1915, H. S. Barber; July 1 and 7, R. P. Currie; July 8, 1904, at light, E. A. Schwarz; and August 5, 1915, at tulip tree sap, R. C. Shannon. Maryland near Plummers Island, June 18, 1908, H. S. Barber; Chain Bridge, Md., May 19, 1911; Great Falls, Va., May 19, and August 11, 1915, McAtee. Cabin John, Md., September 23, 1911, W. D. Appel.

**Ischnoptera divisa** Saussure and Zehntner.

Plummers Island, July 23, 1905, H. S. Barber; also June, 1912, with oötheca.

**Ischnoptera pensylvanica** De Geer.

Numerous records: Plummers Island, May 24 to July 14; at light, May 29, 1911, J. C. Crawford. Cupid's Bower Island, Md., June 7, 1915, W. Perham; Jackson's Island, Md., July 12, H. S. Barber; High Island, Md., female with fresh oötheca, July 1, 1904, Caudell; Great Falls, Va., July 12, H. S. Barber. Variety *inaequalis* taken on Plummers Island, July 10, 1910, McAtee.

**Ischnoptera uhleriana** Saussure.

The most common species of the genus: Plummers Island, May 20 to August 11; at light, May 23, 1911, P. R. Myers; July 9, 1902, H. S. Barber; with oötheca, August, 1912; nymphs, May 23, 1915; Jackson's Island, Md., May 18, 1902, H. S. Barber; nymphs collected at Cabin John Bridge, Md., March 27, 1902, matured May 9; Glen Echo, Md., July 11, 1914, with oötheca; some adults freshly matured and one with oötheca collected on High Island, Md., July 1, 1903, Caudell; Virginia near Plummers Island, June 10, 1902, H. S. Barber; May 17, 1908, nymph in nest of *Formica obscuriventris*, McAtee.

**Blatella germanica** Linnaeus.

Only one specimen taken April 15, 1906, McAtee, that in house at Plummers Island, where it undoubtedly was carried in a parcel of provisions.

**Cryptocercus punctulatus** Scudder.

This widely but sparsely distributed roach was captured on Cupids Bower Island, Md., June 23 and June 31, 1915, by H. S. Barber and R. C. Shannon, respectively. The specimens were obtained from rotten pine logs.

*Mantidae.***Stagmomantis carolina** Johansson.

Strange to say the mantis has not yet been taken on Plummers Island, and it appears to be scarce along the upper river, though it is common enough in some directions from Washington. High Island, Md., September 29, 1902, large nymph, Caudell; Black Pond, Va., September 14, 1913, W. D. Appel; Chain Bridge, Va. August 17, 1912, Caudell.

*Phasmidae.***Diapheromera femorata** Say.

Common, sometimes abundant. Plummers Island: Nymphs may be seen as early as April, become more conspicuous as the summer progresses, mature and are seen mating in September; latest adult collected November 15, 1912, H. S. Barber. One obtained November 7, 1901 (R. P. Currie) lived in captivity 2 days during which period it laid 3 eggs. Great Falls, Md., September 4, 1899; Great Falls, Va., September 12, 1912, mating, October 4, 1916, Caudell; Difficult Run, Va., October 3, 1915, McAtee; Bellview to Difficult Run, Va., September 19, 1916, Caudell.

**Manomera blatchleyi** Caudell.

Plummers Island, July, 1907, W. Palmer; October 28 and November 15, 1912, H. S. Barber; Great Falls, Md., July 30, 1916, Caudell.

All these specimens are females, no males having been seen. This is also true of the many similar specimens taken on Long Island, N. Y., by Wm. T. Davis and there is a possibility that this may prove to be another species than *blatchleyi*. This has formerly been recorded as *Diapheromera velici*.

*Acridiidae.***Nomotettix cristatus compressus** Morse.

Maryland near Plummers Island, October 22, 1915, McAtee; Chesapeake and Ohio Canal, Seven-locks, Md., April 27, 1914, L. O. Jackson; Great Falls, Va., September 12, 1912, October 4, 1916, Caudell; May 19, 1915, McAtee; Bellview to Difficult Run, Va., September 19, 1916, Caudell; the long-winged form, *atavus* Blatchley, Maryland near Plummers Island, October 22, 1915, McAtee.

**Acrydium arenosum angustum** Hancock.

Common; Plummers Island; March 30 to October 13; Maryland near Plummers Island, April 6, 1913, W. D. Appel; April 16, 1916, D. C. Mabbott; Cabin John Bridge, Md., September 23, 1900, Caudell; May 10, 1913, W. D. Appel; Great Falls, Va., April 20, 1916, October 4, 1916, McAtee; August 5, 1904, Caudell; May 19, 1915, L. O. Jackson; Bellview to Difficult Run, Va., September 19, 1916, Caudell.

**Acrydium ornatum** Say.

Great Falls, Md., August 5, 1904, Caudell; Bellview to Difficult Run, Va., September 19, 1916, Caudell; Virginia shore above Plummers Island, Md., October 14, 1914, R. C. Shannon; Maryland near Plummers Island, April 1, 1916; Plummers Island, Md., July 27, 1916, McAtee.

**Neotettix bolivari** Hancock.

Great Falls, Va., August 1, 1916, McAtee.

**Neotettix femoratus** Scudder.

Virginia near Plummers Island, June 20, 1905, McAtee.

**Paratettix cucullatus** Burmeister.

Common; Plummers Island, April 21 to August 26; nymphs May 11, 17 and 19. Great Falls, Md., May 23, 1915, McAtee; Virginia near Plummers Island, June 3, 1902, R. P. Currie.

**Tettigidea armata** Morse.

Black Pond, Va., September 24, 1913, W. D. Appel. One ♀.

**Tettigidea laeralis** Say.

Common; Plummers Island, March 27 to October 12; in copula May 5, 1912, J. C. Crawford. Maryland near Plummers Island, January 18 to September 1; Cabin John Bridge, Md., May 10, 1913, W. D. Appel; Great Falls, Va., May 19, 1915, October 4, 1916, McAtee; Black Pond, Va., May 21, 1911, Virginia near Plummers Island, October 25, 1914, Chain Bridge, Va., May 18, 1913, W. D. Appel.

**Tettigidea lateralis** Say variety **polymorpha** Burmeister.

More common than typical variety; Plummers Island, March 24 to October 26; in copula July 14 and 21, 1907, A. K. Fisher; Angler's Club, Md., August 15, 1915, nymph, McAtee; Maryland near Plummers Island, April 5, 1912 (in copula), to August 18;



Cabin John Bridge, Md., April 19, 1905, (in copula) to May 5; High Island, Md., November 10, 1901; Great Falls, Va., June 10 to October 4, in copula, August 1; Bellview to Difficult Run, Va., September 19, 1916; Virginia near Plummers Island, April 18 to July 24; Chain Bridge, Va., May 23, 1905, adult male in spider's web, Caudell.

**Tryxalis brevicornis** Linnaeus.

Plummers Island, September 29, 1915; Great Falls, Md., August 15, 1915, common in both green and brown phases, on vegetation about pond bordering canal, McAtee.

**Syrbula admirabilis** Uhler.

Great Falls, Md., August 15, 1915, McAtee; Maryland near Plummers Island, August 18, 1916; Glen Echo, Md., July 10, 1914, nymph, Caudell; Dalecarlia Reservoir, D. C., August 22, 1915; Bellview to Difficult Run, Va., September 19, 1916, Caudell; October 3, 1915; Virginia near Plummers Island, September 29, 1915, McAtee; Chain Bridge, Va., September 13, 1916, Caudell.

**Eritettix simplex** Scudder.

Maryland near Plummers Island, May 9, 1915, McAtee; Cabin John Bridge, Md., May 10, 1913; Glen Echo, Md., February 2, 1913, nymphs, W. D. Appel; July 10, 1914, Morgan Hebard (Rehn and Hebard, 1916 (2), p. 159); Bellview to Difficult Run, Va., September 19, 1916, Caudell.

**Orphulella pelidna** Burmeister.

Plummers Island, September 2, 1904, Caudell; Great Falls Md., August 15, 1915, Bellview to Difficult Run, Va.; September 11, 1916; Maryland near Plummers Island, May 9, 1915, McAtee; Glen Echo, Md., July 10, 1914, Caudell; Dalecarlia Reservoir, D. C., August 22, 1915, Bellview to Difficult Run, Va., October 3, 1915, McAtee.

**Orphulella speciosa** Scudder.

Glen Echo, Md., August 10, 1905, July 10, 1914, Caudell.

**Dichromorpha viridis** Scudder.

Plummers Island, July 13 to August 29; nymphs July 14 and August 27; Great Falls, Md., August 5, 1904, Caudell, August 15, 1915, McAtee; Maryland near Plummers Island, June 17, 1913, W. D. Appel; July 14, 1915; Little Falls, D. C., August 22, 1915; Bellview to Difficult Run, Va., September 19, 1916, McAtee;

Great Falls, Va., nymphs, August 5, 1915, September 12, 1912, Caudell, October 4, 1916, McAtee; Chain Bridge, Va., September 13, 1916, Caudell.

***Chloealtis conspersa* Harris.**

Glen Echo, Md., July 10, 1914, many of both sexes, all mature except one large female nymph; in edge of open woods, Caudell; Great Falls, Va., October 4, 1916, McAtee.

***Arphia sulphurea* Fabricius.**

Common; Plummers Island, adults May 4 to September 1, nymphs August 4 to October 12; Great Falls, Md., June 12, 1904, Caudell; Maryland near Plummers Island, March 9 to May 9, 1915, McAtee; Cabin John Bridge, Md., May 10, 1913, W. D. Appel; Glen Echo, Md., July 10, 1914, Caudell; Great Falls, Va., May 19, 1915, Virginia near Plummers Island, May 8, 1915, McAtee; Chain Bridge, Va., May 23. Some individuals have the hind femora conspicuously bifasciate externally while in others they are unicolorous.

***Arphia xanthoptera* Burmeister.**

Plummers Island, April 29, 1905 (nymph), D. H. Clemons, June 10, 1906, July 16, 1905, October 12 and 27, 1906; Maryland near Plummers Island, September 29 and November 3, McAtee.

***Chortophaga viridifasciata* De Geer.**

Very common; Plummers Island, nymphs April 5 to October 20, adults at intermediate dates; Great Falls, Md., May 23 and August 11, 1915, McAtee; Maryland near Plummers Island, April 1, 1916 (nymph), McAtee; May 9, 1913, W. D. Appel, May 9, 1915, July 2, 1916, McAtee; Cabin John Bridge, Md., May 4 and 10, 1913, W. D. Appel, March 27, 1902, many nymphs, some green, some brown, and some green with top of head, thorax, and abdomen reddish brown, Caudell; April 19; High Island, Md., November 10, 1901 (nymphs), Caudell; Bellview to Difficult Run, Va., September 19, 1916, Caudell; Great Falls, Va., May 10 and 19, 1915, October 4, 1916 (nymph), McAtee; Scott's Run, Va., June 2, 1912, W. D. Appel, July 25, 1915, J. Silver; Chain Bridge, Va., September 13, 1916, Caudell.

***Encoptolophus sordidus* Burmeister.**

Dalecarlia Reservoir, D. C., August 22, 1915, McAtee; Black Pond, Va., September 21, 1911, W. D. Appel, Bellview to Difficult Run, Va., September 19, 1916, Chain Bridge, Va., October 24, 1915, McAtee; September 13, 1916, Caudell.

**Hippiscus phoenicopterus** Burmeister.

Chesapeake and Ohio Canal, near Cabin John Run, Md., April 27, 1914, L. O. Jackson; Chain Bridge, Md., May 23, 1903, nymph collected which matured as a female June 14, Caudell; Great Falls, Va., May 19, 1915, nymph, McAtee; Virginia near Plummerville Island, June 17, 1913; Chain Bridge, Va., October 24, 1915, nymph, L. O. Jackson.

**Hippiscus rugosus** Scudder.

Plummerville Island, Md., October 1, 1905, McAtee; Conduit Road, opposite Plummerville Island, Md., September 5 and 10, 1915, adults of both sexes Caudell; Bellview to Difficult Run, Va., October 3, 1915 and September 19, 1916, McAtee.

**Hippiscus apiculatus** Harris. (*tuberculatus* of authors.)

Great Falls, Md., May 23, 1915, McAtee; Maryland near Plummerville Island, April 22, 1903, H. S. Barber; Cabin John Bridge, Md., May 10, 1913, Great Falls, Va., May 9, 1916, Bertha Currie; Black Pond, Va., May 21, 1911, W. D. Appel; Virginia near Plummerville Island, June 20, 1909, McAtee.

**Dissosteira carolina** Linnaeus.

Plummerville Island, Md., June 19, 1905, nymph, July 5, 1914, and July 16, 1905, McAtee; Great Falls, Md., August 5, 1904, Caudell; Maryland near Plummerville Island, September 5, 1915, L. O. Jackson; Cabin John Bridge, Md., September 11, 1902, in copula, Caudell; September 23, 1911, W. D. Appel; Glen Echo, Md., July 10, 1914, nymphs and adults; Great Falls, Va., September 12, 1912, Caudell; October 4, 1916, McAtee; Bellview to Difficult Run, Va., September 19, 1916, Caudell; Chain Bridge, Va., September 13, 1916, Caudell.

**Spharagemon bolli** Scudder.

Plummerville Island, July 16, 1905, McAtee; September 2, 1904, Caudell; September 30, 1906, A. K. Fisher; Maryland near Plummerville Island, August 18, 1916, Caudell; Great Falls, Md., August 15, 1915, McAtee; Great Falls, Va., September 12, 1912, Caudell; October 3, 1915, McAtee; Black Pond, Va., September 21, 1911, W. D. Appel; Bellview to Difficult Run, Va., September 19, 1916, Caudell.

**Schistocerca serialis** Thunberg. (= *americana* Drury).

Maryland near Plummerville Island, November 3, 1906, A. K. Fisher.

**Schistocerca damnifica** Saussure.

A common grasshopper, Plummers Island, October 27, 1906, I. J. Condit; November 3, 1906, A. K. Fisher; Great Falls, Md., May 23, 1915, McAtee; Maryland near Plummers Island, March 19 and 27, 1915, J. C. Crawford; April 23, 1916, August 15, 1915, McAtee; Cabin John Bridge, Md., May 10, 1913; High Island, Md., November 10, 1901, Caudell; Great Falls, Va., February 26, 1905, active adult, H. S. Barber, September 12, 1912, Caudell; October 3, 1915, McAtee; October 4, 1916, Caudell; Bellview to Difficult Run, Va., September 19, 1916, McAtee; Chain Bridge, Va., September 13, 1916, Caudell; October 24, 1915, L. O. Jackson.

**Schistocerca rubiginosa** Harris.

Cabin John Bridge, Md., August 18, 1914, H. Nicols.

**Melanoplus atlanis** Riley.

Great Falls, Md., August 15, 1915, McAtee; Maryland near Plummers Island, September 10, 1915, Glen Echo, Md., July 10, 1914, Caudell; Great Falls, Va., June 26, 1914, August 11 and October 3, 1915, McAtee; October 4, 1916, Caudell; Bellview to Difficult Run, Va., September 19, 1916; Virginia near Plummers Island, July 14 and September 29, 1915, McAtee; Chain Bridge, Va., August 17, 1912, September 13, 1916, Caudell.

**Melanoplus collinus** Scudder.

Great Falls, Va., September 12, 1912, many, one pair mating; October 4, 1916, Caudell; Bellview to Difficult Run, Va., September 19, 1916, McAtee.

**Melanoplus femoratus** Burmeister.

Maryland near Plummers Island, June 29, 1913, W. D. Appel; September 10, 1915; Glen Echo, Md., July 10, 1914, large nymphs and adults of both sexes, Caudell; Dalecarlia Reservoir, D. C., July 2, 1911, W. D. Appel; Great Falls, Va., August 15, 1915, McAtee; September 12, 1912, Caudell; October 4, 1916; Bellview to Difficult Run, Va., September 19, 1916, McAtee; Scott's Run, Va., July 25, 1915, L. O. Jackson; Chain Bridge, Va., September 13, 1916, Caudell.

**Melanoplus femur-rubrum** De Geer.

Plummers Island, September 5, 1915, McAtee; September 30 and October 7, 1906, A. K. Fisher; Great Falls, Md., August 15, 1915; Maryland near Plummers Island, August 16, 1916, Caudell;

September 5 and 29, 1915, McAtee; Cabin John Run, Md., October 10, 1915, L. O. Jackson; High Island, Md., November 10, 1901, Caudell; Little Falls, D. C., August 22, 1915, McAtee; Chain Bridge, D. C., September 7, September 13, 1916, Great Falls, Va., September 12, 1912, October 4, 1916; Bellview to Difficult Run, Va., September 19, 1916, Caudell; October 3, 1915, McAtee; Chain Bridge, Va., August 17, 1912, Caudell.

**Melanoplus punctulatus** Scudder.

Plummers Island, Md., August 11, D. H. Clemons; Cabin John, Md., August, 1907, W. Palmer; Maryland near Plummers Island, August 18, 1916, Caudell; October 31, 1915 W. Stone (Rehn & Hebard, 1916 (2), p. 246); November 11, 1915, Hebard; Bellview to Difficult Run, Va., September 19, 1916; Great Falls, Va., September 5, 1916, McAtee; October 4, 1916, Caudell.

**Melanoplus scudderi** Uhler.

Not so common as *M. femur rubrum* for instance but more frequently collected. Plummers Island, August 20 to October 27; in copula, August 20, September 10, October 11 and 23; nymphs, September 2 and 10; Maryland near Plummers Island, August 18, 1916, Caudell; September 5, 1915, McAtee; High Island, Md., November 10, 1901, Caudell; Dalecarlia Reservoir, D. C., August 22, 1915, McAtee; Chain Bridge, D. C., September 7; Great Falls, Va., September 12, 1912, Caudell; October 4, 1916, McAtee; October 31, 1915, in copula, L. O. Jackson; Bellview to Difficult Run, Va., September 19, 1916, McAtee; Chain Bridge, Va., August 17, 1912, September 13, 1916, Caudell; October 24, 1915, R. A. Emmons.

**Melanoplus tribulus** Morse.

Plummers Island, Md., September 30, 1906, 1 ♀, A. K. Fisher; Difficult Run, Va., September 19, 1916, 1 ♂ adult, Caudell.

**Paroxya atlantica** Scudder.

A single female taken at Great Falls, Va., August 11, 1915, by McAtee, is doubtfully referred here. A male is necessary for positive identification.

**Paroxya clavuliger** Serville. (= *floridana* Thomas.)

Plummers Island, Md., August 15, 1902, nymph, H. C. Pratt; Great Falls, Md., August 15, 1915, McAtee; Maryland near Plummers Island, August 18, 1916, September 10, 1915, Caudell; and September 29, 1915, McAtee; Great Falls, Va., September

12, 1912, October 4, 1916, Caudell; Black Pond, Va., September 21, 1911, W. D. Appel; Bellview to Difficult Run, Va., September 19, 1916, Caudell. A common species in wet places, particularly along the Chesapeake and Ohio Canal.

*Tettigoniidae.*

***Scudderia curvicauda*** De Geer.

Great Falls, Va., July 23, 1914, Caudell and R. P. Currie, August 11, 1915, McAtee and September 12, 1912, Caudell.

***Scudderia furcata*** Bruner.

Abundant; Plummers Island, August 24 to November 5; nymphs, August 27 and 29, one taken on latter date with large Tachinid larva in abdomen; Anglers' Club, Md., August 15, 1915, McAtee; Maryland near Plummers Island, August 3, 1913, W. D. Appel; August 18, 1916, Caudell; Cabin John Bridge, Md., September 2, 1907, F. Knab; September 23, 1911, W. D. Appel; October 10, 1915, L. O. Jackson; High Island, Md.; November 10, 1901, Caudell; Bellview to Difficult Run, Va., September 19, 1916, Caudell; Great Falls, Va., September 12, 1912, Caudell; October 3, 1915, McAtee; October 4, 1916, Caudell; Pimmit Run, Va., September 6, 1907, F. Knab; Chain Bridge, Va., September 13, 1916, Caudell.

***Scudderia texensis*** Saussure and Pictet.

Plummers Island, Md., August 27, 1909, Caudell. (Rehn & Hebard, 1914 (1), p. 296.)

***Amblycorypha oblongifolia*** De Geer.

Common; Plummers Island, July 27 to October 23; Great Falls, Md., August 15, 1915, McAtee; Maryland near Plummers Island, August 3, 1913, W. D. Appel; August 18, 1916, Caudell; Little Falls, D. C., August 22, 1915, McAtee; Great Falls, Va., September 12, 1912; October 4, 1916, Caudell; Virginia near Plummers Island, September 5, 1915, McAtee; October 6, 1911, J. D. Hood; Chain Bridge, Va., September 13, 1916, Caudell.

***Amblycorypha rotundifolia*** Scudder.

Common; Plummers Island, June 15 (nymph) to October 2; Glen Echo, Md., July 10, 1914, Caudell; Dalecarlia Reservoir, D. C., August 22, 1915, McAtee; Great Falls, Va., September 12, 1912, Caudell; Scott's Run, Va., July 25, 1915, J. Silver; Virginia near Plummers Island, September 4, 1903, H. S. Barber.

**Amblycorypha uhleri** Stal.

Plummers Island, July 20, 1903, E. A. Schwarz; August 28, 1902, Barber and Schwarz; September 27, 1908, E. A. Schwarz; Maryland near Plummers Island, August 15, 1915; Great Falls, Va., October 3, 1915, October 4, 1916, McAtee.

**Microcentrum retinerve** Burmeister.

Common; Plummers Island, July 26 (nymph) to November 3; Maryland near Plummers Island, August 18, 1916; Great Falls, Va., September 12, 1912, Caudell.

**Microcentrum rhombifolium** Saussure.

Plummers Island, Md., August 28, 1902, Barber and Schwarz.

**Pterophylla camellifolia** Fabricius. (= *Cyrtophyllus perspicillatus* Auct. not of Burm.)

Abundant; Plummers Island, July 7 to November 1; female found ovipositing in bark of black walnut tree, September 22, 1907, laid an egg in same kind of bark while in confinement next day, McAtee; October 1, 1905, a female was found ovipositing in bark at night, H. S. Barber.

**Neoconocephalus ensiger** Harris.

Cabin John Bridge, Md., October 27, 1915, Caudell.

**Neoconocephalus exiliscanorus** Davis.

Plummers Island, September 6, 1909, H. A. Allard; Maryland near Plummers Island, August 3, 1913, W. D. Appel; Great Falls, Va., July 29, Nathan Banks.

**Neoconocephalus palustris** Blatchley.

Plummers Island, July 22, 1906 (nymph), McAtee; August 27, 1909, H. A. Allard; September 5 and 29, 1915, McAtee; October, 1907, W. Palmer; Black Pond, Va., September 21, 1911, W. D. Appel; Great Falls, Va., September 5, 1916, McAtee; Chain Bridge, Va., August 17, 1912, Caudell.

**Neoconocephalus retusus** Scudder.

Plummers Island, September 2, 1904, September 29, 1907, McAtee (Rehn & Hebard, 1914 (3), p. 404); Chain Bridge, Va., August 17, 1912, September 13, 1916, Caudell; Great Falls, Va., September 5, 1916, October 4, 1916, McAtee; Bellview to Difficult Run, Va., September 19, 1916, Caudell.

**Neoconocephalus robustus** var. **crepitans** Scudder.

Plummers Island, September 2, Caudell; September 17, 1904, H. A. Allard; September 29, 1907; Maryland near Plummers Island, July 27, 1913, McAtee. Plummers Island, August 29, 1912 (nymph), Caudell, September 1, 1907 (nymph), A. K. Fisher; Great Falls, Md., August 15, 1915 (nymph); Maryland near Plummers Island, August 16, 1914, McAtee.

**Neoconocephalus triops** Linnaeus.

Plummers Island, August 2, September 4, 9, and 24, October 28, Barber and Schwarz; October 12, 1906, A. K. Fisher; Black Pond, Va., September 21, 1911, W. D. Appel.

**Orchelimum agile** De Geer.

Plummers Island, August 25, 1912, McAtee; Great Falls, Md., Anglers' Club, Md., August 15, 1915, McAtee; Chesapeake and Ohio Canal, Md., September 25, 1911, Wm. T. Davis; Cabin John, Md., September 23, 1911, W. D. Appel; Great Falls, Va., September 12, 1912; Chain Bridge, Va., September 13, 1916, Caudell.

**Orchelimum laticauda** Redtenbacher.

Common; Plummers Island, August 27 (nymphs and freshly matured adults) to October 26; Maryland near Plummers Island, September 10, 1916, L. O. Jackson; October 22, 1915, McAtee; Chesapeake and Ohio Canal, Md., September 25, 1911, Wm. T. Davis; Cabin John, Md., September 23, 1911, W. D. Appel; Little Falls, D. C., August 22, 1915, McAtee; Chain Bridge, D. C., September 13, 1916, Caudell; Great Falls, Va., September 12, 1912, Caudell; Bellview to Difficult Run, Va., October 3, 1915, McAtee, September 19, 1916, Caudell.

**Orchelimum minor** Bruner.

Song heard on Plummers Island and many specimens taken on Maryland shore nearby, September 6, 1909, H. A. Allard; Great Falls, Va., September 12, 1912, Caudell.

**Orchelimum vulgare** Harris.

Plummers Island, September 2, Caudell; September 5, 1915 (nymph and adults), L. O. Jackson and McAtee; September 30, 1906, A. K. Fisher; October 22, 1915, Great Falls, Md., August 15, 1915, Maryland near Plummers Island, August 18, 1916, Caudell; September 5, 1915, McAtee; Cabin John, Md., September 23, 1911, W. D. Appel; Cabin John Run, Md., October 10,



1915, L. O. Jackson; Great Falls, Va., September 12, 1912, Caudell (one of these specimens is remarkable in having 3 ventral spines on one hind tibia and 4 on the other; otherwise it is typical and the determination is very certain, A. N. Caudell); October 3, 1915, October 4, 1916, McAtee; October 31, 1915, L. O. Jackson; Black Pond, Va., September 21, 1911, W. D. Appel; Bellview to Difficult Run, Va., September 19, 1916; Virginia near Plummers Island, September 5, 1915, McAtee; Chain Bridge, Va., August 17, 1912, Caudell.

***Conocephalus brevipennis*** Scudder.

Plummers Island, August 26, 1901, R. P. Currie; August 29, 1905, H. S. Barber; September 2, 1904, Caudell; September 5, 1915, McAtee; September 15, 1907, October 12 and 13, 1906, A. K. Fisher; Maryland near Plummers Island, August 18, 1916, Caudell; Great Falls, Md., August 15, 1915, McAtee; Cabin John Bridge, Md., October 1907 (long-winged form), W. Palmer; Dalecarlia Reservoir, and Little Falls, D. C., August 22, 1915, McAtee; Great Falls, Va., September 12, 1912, Caudell; October 3, 1915, October 4, 1916, McAtee; October 31, 1915, R. A. Emmons; Black Pond, Va., September 21, 1911, W. D. Appel; Bellview to Difficult Run, Va., September 19, 1916, Caudell; Chain Bridge, Va., August 17, 1912, September 13, 1916, Caudell.

***Conocephalus nemoralis*** Scudder.

The most common species of the genus: Plummers Island, August 25 to November 3; long-winged form, October 4, 1905, D. H. Clemons; Little Falls, D. C., August 22, 1915, McAtee; Chain Bridge, D. C., September 11, 1911, Caudell; Great Falls, Va., September 12, 1912, Caudell; October 3, 1915, McAtee; October 4, 1916, Caudell; Black Pond, Va., September 21, 1911, W. D. Appel; Bellview to Difficult Run, Va., September 19, 1916, McAtee.

***Conocephalus saltans*** Scudder.

Cabin John Bridge, Md., October, 1907, W. Palmer; Bellview to Difficult Run, Va., October 3, 1915, McAtee; both short and long-winged females taken; this is the first eastern record for the long-winged form; Chain Bridge, Va., September 13, 1916, Caudell.

***Conocephalus strictus*** Scudder.

Dalecarlia Reservoir, D. C., August 22, 1915, McAtee; Chain Bridge, D. C., September 7; Chain Bridge, Va., September 13, 1916; Bellview to Difficult Run, Va., September 19, 1916, Caudell.

**Atlanticus americanus** Saussure.

Plummers Island, August 11, 1907, McAtee; Cabin John Run, Md., September 19, 1911, W. T. Davis (Rehn & Hebard, 1916 (1), p. 81).

**Atlanticus davisii** Rehn and Hebard.

Plummers Island, Md., July 5, 1905, E. A. Schwarz; Great Falls, Va., June 16, 1910, W. T. Davis (Rehn & Hebard, 1916 (1), p. 67).

**Atlanticus testaceus** Scudder.

Common; Plummers Island, April 21 (nymph) to September 15; Cabin John Run, Md., June 20, 1911, W. T. Davis; Glen Echo, Md., July 10, 1914, Caudell (Rehn & Hebard, 1916 (1), p. 53); Chain Bridge, Va., May 18, 1913, W. D. Appel.

**Camptonotus carolinensis** Gerstaecker.

Fairly numerous; Plummers Island, July 3 (nymph) to September 17; this leaf-rolling species sometimes utilizes as a substitute for cocoons of its own making, the compartments in the seed pods of *Staphylea trifolia*. Great Falls, Va., July 29, N. Banks.

**Ceuthophilus blatchleyi** Scudder.

Plummers Island, September 2, Caudell; October, 1909, H. S. Barber.

**Ceuthophilus gracilipes** Haldeman.

Fairly common; Plummers Island, May 8 (nymph) to September 22 (adult and nymphs); Cabin John Run, Md., September, 1911, W. T. Davis (Rehn & Hebard, 1916, (2), p. 27); Virginia near Plummers Island, April 28 (nymphs) to October 6.

**Ceuthophilus neglectus** Scudder.

The dominant species of the genus; Plummers Island, March 28 to October 26; in copula, September 24, 1905, eggs laid, September 29, 1912; nymphs, June 15, 1915 (in burrows of groundhog), H. S. Barber; October 11, 1906, Caudell; Jacksons Island, Md., August 27, 1902, H. S. Barber; Dalecarlia Reservoir, D. C., April 13, 1913, W. D. Appel; Great Falls, Va., September 12, 1912, Caudell; Black Pond, Va., September 21, 1911, W. D. Appel; Bellview to Difficult Run, Va., September 19, 1916, Caudell; Virginia near Plummers Island, April 30, 1905, McAtee; September 22, 1905, D. H. Clemons; September 30, 1905 (in copula) H. S. Barber; November 5, 1905, F. Knab.

**Ceuthophilus latens** Scudder.

Plummers Island, September 24, 1905, mating. Barber; October, 1909, Barber; August 12, 1914, Shannon; July 29, August 2 and 5, 1914, Caudell. Difficult Run, Va., September 21, 1916, Caudell.

**Ceuthophilus spinosus** Scudder.

Cabin John Run, Md., September, 1911, W. T. Davis (Rehn & Hebard, 1916 (2), p. 274).

**Ceuthophilus uhleri** Scudder.

Plummers Island, August 2, 1914, R. C. Shannon; September 10, 1915, October 4, 1912, October 11, 1906, Caudell; Great Falls, Md., August 12, 1912; Cabin John Run, Md., September, 1911, W. T. Davis (Rehn & Hebard, 1916 (2), p. 269) Great Falls, Va., September 12, 1912, Caudell.

*Gryllidae.***Gryllotalpa hexadactyla** Perty. (= *borealis* Burmeister.)

A few specimens have been taken on Plummers Island, a young nymph in 1906 by A. K. Fisher, another August 18, 1912, by McAtee, and an adult male which was singing by R. C. Shannon, September 14, 1914.

**Tridactylus terminalis** Scudder.

Glen Echo, Md., May 11, 1903. A single specimen taken by O. H. Heidemann.

**Ellipes minuta** Scudder.

Common. Plummers Island, April 22 (nymph) to October 5; Maryland near Plummers Island, April 8, 1914, McAtee; April 27, 1914, L. O. Jackson; June 8, 1913, McAtee; Virginia near Plummers Island, April 27.

**Myrmecophila pergandei** Bruner.

Plummers Island, May 1, 1914, McAtee; May 6 and 16, 1902, H. S. Barber, August 15, 1913, McAtee; September 10, 1903, H. S. Barber; October 13, 1912, J. D. Hood; Virginia near Plummers Island in nest of *Formica*, May 17, 1908, McAtee.

**Nemobius bruneri** Hebard.

Plummers Island, October 11 and 12, 1906, Caudell, A. K. Fisher; Cabin John Run, Md., September 23, 1911, W. T. Davis.

**Nemobius carolinus** Scudder.

Plummers Island, September 3 and 7, 1914, R. C. Shannon; October 12, 1906, A. K. Fisher; Great Falls, Va., September 12, 1912, October 14, 1916, Caudell; October 3, 1915, McAtee; Dead Run, Va., August 29, 1912, Caudell.

**Nemobius confusus** Blatchley.

Plummers Island, August 26 and 28, 1912, parasitized nymphs, Caudell, H. S. Barber; August 27, September 3, 1914, R. C. Shannon; September 10, 1915; Cabin John Run, Md., September 9, 1911, W. T. Davis (Hebard, 1913, p. 492); Virginia near Plummers Island, September 4, 1903, Caudell; September 11, 1902, Barber and Schwarz; Dead Run, Va., August 29, 1912, Caudell; Great Falls, Va., October 4, 1916, McAtee.

**Nemobius cubensis** Saussure.

Montgomery County, Md., September 25, 1911, W. T. Davis (Hebard, 1913, p. 461). Mr. Davis assures us this record pertains to the vicinity of the Potomac between the District of Columbia and Plummers Island. Great Falls, Va., October 4, 1916, Caudell.

**Nemobius fasciatus** De Geer.

Plummers Island, July 28, 1907, nymph, A. K. Fisher; August 22, 1902, R. P. Currie; September 3, 1905, A. K. Fisher; October 11, 1906, H. A. Allard. Variety *vittatus* Harris, Plummers Island, August 29, 1905, H. S. Barber; October 7, 1906, A. K. Fisher; October 11, 1906, Caudell; Great Falls, Md., August 15, 1915, McAtee; Great Falls, Va., August 17 and September 12, 1912, Caudell; October 4, 1916, McAtee; Bellview to Difficult Run, Va., September 19, 1916, October 3, 1915, McAtee; Chain Bridge, Va., August 17, 1912, Caudell.

**Nemobius maculatus** Blatchley.

Common; Plummers Island, August 9 (nymphs and adults) to October 31; Great Falls, Md., August 5, 1904, in copula; Cabin John Run, Md., September 19, 1912, W. T. Davis; Great Falls, Va., August 11, 1915 (nymph), McAtee; September 12, 1912, Caudell; October 3, 1915, October 4, 1916, McAtee; October 31, 1915, L. O. Jackson; Virginia near Plummers Island, September 4, 1903, H. S. Barber; September 11, 1902, Barber and Schwarz; Dead Run, Va., August 29, 1912, Caudell; Bellview to Difficult Run, Va., September 19, 1916, McAtee.

**Nemobius palustris** Blatchley.

Bellview to Difficult Run, Va., September 19, 1916, Caudell.

**Gryllus assimilis** Fabricius.

Variety *integer* Scudder, Great Falls, Va., May 19, 1915, McAtee; variety *neglectus* Scudder, Maryland near Plummers Island, June 8, 1913, McAtee; variety *pennsylvanicus* Burmeister, common, Plummers Island, May 23, to October 27; nymphs, June 30 and August 29; Maryland near Plummers Island, April 5, 1914, L. O. Jackson; April 6, 1913, W. D. Appel; Dalecarlia Reservoir, D. C., August 22, 1915; Great Falls, Va., May 19, 1915, McAtee; September 12, 1912, Caudell; October 4, 1916, McAtee; October 31, 1915, L. O. Jackson; Black Pond, Va., September 21, 1911, W. D. Appel; Bellview to Difficult Run, Va., September 19, 1916; Chain Bridge, Va., September 13, 1916, Caudell.

**Miogryllus verticalis** Serville.

Plummers Island, April 6, 1905, McAtee; June 9, 1905, Caudell; July 3, 1904, F. Knab; Great Falls, Va., October 4, 1916, Caudell; all of these nymphs; Great Falls, Md., an adult ♀, August 5, 1904 Mrs. Caudell.

**Oecanthus exclamationis** Davis.

High Island, Md., September 29, 1902. One female taken by Caudell.

**Oecanthus angustipennis** Fitch.

Plummers Island, September 9 to November 8; Chain Bridge, Va., August 17, 1912, Caudell; November 11, 1915, dead specimen, Hebard; Great Falls, Va., October 4, 1916, Caudell.

**Oecanthus latipennis** Riley.

Plummers Island, August 19 to October 31; September 2, 1904, singing at 3.30 a.m., H. S. Barber; Maryland near Plummers Island, July 27 and August 27, 1913, W. D. Appel; August 18, 1916, Caudell; Cabin John Run, Md., October 10, 1915, L. O. Jackson; High Island, Md., September 29, 1902; Black Pond, Va., September 14, 1913, W. D. Appel; Great Falls, Va., October 4, 1916, Caudell.

**Oecanthus quadripunctatus** Beutenmuller.

Bellview to Difficult Run, Va., September 19, 1916, Caudell; October 3, 1915, McAtee; Virginia near Plummers Island, October 19, 1914, R. C. Shannon.

**Neoxabea bipunctata** De Geer.

Plummers Island, June 18, 1907 (nymph) Caudell; July 19, 1905, Barber and Schwarz; July 19, 1914, McAtee; August 12, 1907, A. K. Fisher; August 16, 1916, H. L. Viereck; August 20, 1916, R. C. Shannon; September 9 and 29, Barber and Schwarz.

**Anaxipha exigua** Say.

Common; Plummers Island, April 10 (nymph) to October 7; Maryland near Plummers Island, June 26, 1904, Caudell; August 18, 1916, Caudell; August 20, 1916, H. L. Viereck; Cabin John Run, Md., July 8, 1903, Theo Pergande; October 10, 1915, L. O. Jackson; High Island, Md., July 14, 1904 (nymphs), September 29, 1902, Caudell; Dalecarlia Reservoir and Little Falls, D. C., August 22, 1915; Bellview to Difficult Run, Va., September 19, 1916, Caudell, McAtee; Great Falls, Va., August 11, 1915, McAtee; September 12, 1912; October 4, 1916 (nymph), Caudell; Virginia near Plummers Island, October 19, 1914, R. C. Shannon; Chain Bridge, Va., August 17, 1912, Caudell.

**Falcicula hebardi** Rehn.

High Island, Md., July 1, 1904, one female taken by Caudell; Maryland near Plummers Island, June 17, 1913, McAtee; a single female taken by sweeping.

**Cyrtoxipha columbiana** Caudell.

Plummers Island, September 13, 1909 and September 24, 1902, Barber and Schwarz.

**Phyllopalpus pulchellus** Uhler.

Common; Plummers Island, July 28 (nymph) to September 15; Maryland near Plummers Island, August 3, 1913, McAtee; High Island, Md., September 29, 1902, Chain Bridge, D. C., September 13, 1916, Caudell.

**Hapithus agitator** Uhler.

Common; Plummers Island, August 17 to October 20; Maryland near Plummers Island, August 18, 1916, Caudell; Great Falls, Va., September 12, 1912, Caudell; October 4, 1916, McAtee; Black Pond, Va., September 14, 1913, W. D. Appel; Virginia near Plummers Island, September 11, 1902, Barber and Schwarz.

**Orocharis saltator** Uhler.

Common; Plummers Island, July 28 to November 8; nymphs August 14, 26, 29, and September 8 and 15; Virginia near Plummers Island, September 30, 1905, H. S. Barber, October 15,

1916, C. T. Greene and W. R. Walton; Great Falls, Va., October 4, 1916, Caudell.

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Record 15 species from Plummers Island and 25 other species from points within our area.

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## NOTES ON NORTH AMERICAN TACHINIDAE, INCLUDING THE DESCRIPTION OF ONE NEW GENUS.

BY HARRISON E. SMITH,

*Bureau of Entomology, Cereal and Forage Insect Investigations.*

### **Doryphorophaga** Townsend.

This is evidently a valid genus, with *Lydella doryphorae* Riley as the genotype.<sup>1</sup> Mr. Walton<sup>2</sup> has considered it expedient to retain *doryphorae* in *Neopales* (*Phorocera* of authors) "until

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<sup>1</sup> Proc. Ent. Soc. Wash., Vol. 14, p. 164.

<sup>2</sup> Proc. U. S. N. M., Vol. 48, p. 183.